AMENDMENTS TO THE SPECIFICATION

Please replace the fourth full paragraph on page 5 (i.e., between lines 19 and 28) with the following amended paragraph:

The filter may include a breadth-first-search subdivider that generates nearest newly-constrained elements and subdividing all nearest newly-constrained elements before subdividing a neighbor of a nearest newly-constrained element. A preferred example of ~~depth~~ breadth-first-search subdivision that may be used in the present invention is as follows: initially select an arbitrary element to subdivide, then subdivide in a breadth-first manner in which after subdividing the first element, each neighbor of the first element is visited and subdivided before visiting second nearest neighbors of the first element; after visiting all the neighbors of the first element, one of the neighbors is arbitrarily selected and then all of its neighbors are visited, after which another neighbor of the first element is selected and then all of its neighbors are visited.

Please insert the following new paragraph at the end of the "Brief Description of the Drawings" section (i.e., on page 6, line 23) of the original specification:

Figure 7 illustrates a tetrahedralization filter according to the invention.

Please insert the following new paragraph before the first full paragraph on page 14 (i.e., between lines 4 and 5) of the original specification:

An exemplary embodiment of a tetrahedralization filter 139 is illustrated in Figure 7, in which a receiver 140 receives the data defined on the non-conformal mixed element mesh, which is composed of elements subdividable into tetrahedral. A processor 141 for the mesh data is provided to dynamically associate individual to-be-subdivided elements in the mesh with a degree of freedom value in an element-by-element degree

of freedom directory 142. An element subdivider 143 discriminates on whether to initiate subdivision or hold subdivision based on the degree of freedom directory, in which subdivision priority is to relatively most-constrained to-be-subdivided elements. Element subdivider 143 can include a subdivision strategizer 144, and the degree of freedom directory 142 can be a dynamic directory, which is updated between element subdivisions. Moreover, element subdivider 143 can include a breadth-first-search subdivider 145 that generates nearest newly-constrained elements and subdividing all nearest newly-constrained elements before subdividing a neighbor of a nearest newly-constrained element.